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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,435	08/17/2001	Hongjie Cao	1942	3469
35157	7590	12/13/2006		
NATIONAL STARCH AND CHEMICAL COMPANY P.O. BOX 6500 BRIDGEWATER, NJ 08807-3300			EXAMINER GOLLAMUDI, SHARMILA S	
			ART UNIT 1616	PAPER NUMBER

DATE MAILED: 12/13/2006

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/932,435  
Filing Date: August 17, 2001  
Appellant(s): CAO ET AL.

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David LeCroy  
Registration No. 37,869  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed September 26, 2006 appealing from the Office action mailed November 2, 2005.

The appeal brief filed 9/26/06 pertains to the rejections of US 09/932,435 and not 09/932,204. It is noted that appellant has erroneously indicated this appeal brief is for US 09/932,204 on page 1 of the appeal brief.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

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**LABORATORIES, LTD.**

<b>6,113,881</b>	<b>BHATT et al</b>	<b>9-2000</b>
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<b>6,147,038</b>	<b>HALLORAN</b>	<b>11-2000</b>
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<b>EP0321216</b>	<b>STAUFFER et al</b>	<b>6-1989</b>
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**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**A) Claims 1, 4, 6-11, 18, and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-236310.**

JP discloses a composition containing heat-treated xanthan gum. See example 5. The reference discloses the method of making xanthan gum used in the composition. (Note pg. 5, 6, and example 1). JP 11-236310 discloses a composition containing xanthan gum in the amount of 0.01-2%. See page 6, third paragraph. The composition may be in various forms including a cream or gel (see page 11, last paragraph and last line) and is mixed with other cosmetic excipients including water-soluble polymers, antioxidants, gelling agents. See page 7-11. The reference teaches the method of making xanthan gum prior to mixing it into a cosmetic composition with other excipients. The reference discloses that xanthan gum provides stability to the composition but has low viscosity and a greasy feel if too much is added. The reference discloses heating the gum 100°C and above increases viscosity, and the gum should not be heated above 140°C to avoid discoloration of the gum. Thus, the temperature should be with the

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range of 100°-140°C. The reference teaches the preferable viscosity range of the gum to be 5000-22000 cPs, which allows it to be used in small quantities. (Note 4-6 and example 1). JP discloses heating xanthan gum under vacuum at a temperature of 115°Celsius for 3 hours.

Reference example 2 discloses an aqueous solution of the high molecular weight xanthan gum (heat treated at 115 degrees Celsius for 3 hours under a vacuum) in a weight percent of 0.5, 1, 1.5, and 2 respectively. The viscosity of 0.5% xanthan gum in an aqueous solution is 5000 mPas, 1% xanthan gum in an aqueous solution is 10,000 mPas, 1.5% xanthan gum in an aqueous solution 22,000 mPas, and 2% xanthan gum in an aqueous solution is 33,000 mPas. Note that this composition reads on claim 11 since xanthan gum is a known “gelling agent” that is used to thicken compositions; thus the water and xanthan gum form a gel.

Note that although JP does not explicitly specify the moisture content of less than 8% and less than 1%, it is the examiner’s position that JP’s xanthan gum disclosed especially the xanthan gum disclosed in reference example 2 inherently has the instant moisture content. The examiner bases this position on that fact that JP’s xanthan gum is heated treated at 115 degrees Celsius for 3 hours and applicant claims a heat treatment of 105°Celsius for at least 2.5 hours has a moisture content of less than 1% (see the dependent limitation in claim 9). Therefore, it is the examiner’s position that the xanthan gum has the instant moisture content and since the examiner has made a rationale for inherency, the burden has shifted to the applicant to prove that the prior art does not have the instant property.

With regard to the limitation of “a fixative effective amount”, the instant specification defines on page 7 wherein applicant states that the xanthan gum is utilized in the amount of 0.01-20% and preferably 0.01- less than 2% and JP teaches a range of 0.01-2%.

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With regard to the preamble, the examiner's points out that "hair composition" does not hold patentable weight unless it denotes a structural limitation and instant case it does not.

It is the examiner's position that reference example 2 must inherently meet the recitation "wherein the composition has a high humidity curl retention of at least about 80% for two hours at 90% relative humidity" since the prior art utilizes the same xanthan gum as instant invention and in the same amount. Therefore, since the prior art composition and the instantly claimed composition are not structurally distinguishable, both must have the same properties.

**B) Claim 12, 21-22, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-236310 optionally in view of US 6,147,038.**

As set forth above, JP 11-236310 discloses a composition containing heat-treated xanthan gum in the amount of 0.01-2%, that can be used in hair cosmetics (see page 11, last paragraph) and method of preparing compositions containing the heat treated xanthan gum. The reference discloses that xanthan gum provides stability to the composition but has low viscosity and a greasy feel if too much is added. JP discloses heating the xanthan gum to provide for a high molecular weight xanthan gum. The gum is heated at 100°-140°Celsius, preferably 100°-130° Celsius, and most preferably 105-125°Celsius for 30 minutes to 10 hours and more preferably 30 minutes to 7 hours. The reference discloses to avoid discoloration of the gum the xanthan gum should not be heated above 140°C. Reference example 2 discloses an aqueous solution of the high molecular weight xanthan gum (heat treated at 115°Celsius for 3 hours) at a weight percent of 0.5, 1, 1.5, and 2. The viscosity of 0.5% is 5000 mPas, 1% is 10,000 mPas, 1.5% 22,000 mPas, and 2% is 33,000 mPas.

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JP does not specify the turbidity of the composition. Further, JP does not specify the method of claim 21 and 22.

Halloran teaches optically clear hair conditioning compositions containing aminofunctional silicone microemulsions. Halloran teaches NTU's (Nephelometric Turbidity Units) is the unit of measure for the turbidity or haze of a liquid. NTU's range from 0.04 to 1,000 or higher. The haze value of a relatively turbid solution is about 100 NTU's or higher, and mixtures with a slight haze give values of 20 to 50 NTU's. In contrast the compositions of this invention have an average haze value of 3 to 5 NTU's. See column 3, lines 5-16.

Firstly, it is deemed obvious to a skilled artisan in the art at the time the invention was made to manipulate the prior art's turbidity parameters to provide for a desired result thorough routine experimentation. Halloran demonstrates the state of the art wherein it is known that a turbid solution has a value about 100 NTU or higher and a slight hazy solution has a value 20 to 50 NTU. Therefore, it is the examiner's position that the turbidity of JP's Reference Examples 1-2 is similar, if not the same, as the instantly claimed turbidity, i.e. less than 100 NTU since Reference Examples 1-2 only contain heat-treated xanthan gum and water and does not contain any excipients that would affect the clarity of the composition. Thus, depending on the clarity desired, one would select and further add excipients (besides the heat-treated xanthan gum and water) based on the final clarity desired.

Secondly, it is further obvious to a skilled artisan in the art at the time the invention was made to apply JP's xanthan gum composition to the hair. One would have been motivated to do so since JP teaches the use of JP's heat treated xanthan gum in hair cosmetics (page 11); thus the methodology of a hair composition is implicit in that it is applied to the hair.

**C) Claims 13-14, 16-17, 20-23, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-236310 in view of Bhatt et al (6,113,881).**

JP 11-236310 discloses a composition containing heat treated xanthan gum in the amount of 0.01-2%, that can be used in hair cosmetics and in the form of a cream or gel and method of preparing compositions containing the heat treated xanthan gum. The reference discloses that xanthan gum provides stability to the composition but has low viscosity and a greasy feel if too much is added. JP discloses heating the xanthan gum to provide for a high molecular weight xanthan gum. The gum is heated at 100°-140°Celsius, preferably 100-130°Celsius, and most preferably 105-125°Celsius for 30 minutes to 10 hours and more preferably 30 minutes to 7 hours. The reference discloses to avoid discoloration of the gum the xanthan gum should not be heated above 140°C. The xanthan has a moisture content of less than 50%, preferably less than 20%, and most preferably less than 15%. See page 5. Reference example 2 discloses an aqueous solution of the high molecular weight xanthan gum (heat treated at 115 degrees Celsius for 3 hours) at a weight percent of 0.5, 1, 1.5, and 2. The viscosity of 0.5% is 5000 mPas, 1% is 10,000 mPas, 1.5% 22,000 mPas, and 2% is 33,000 mPas. JP teaches the xanthan gum may be used in hair cosmetics and may include other additives such as film-forming agents, resins, film-forming agents, etc. See page 7, first paragraph.

Although, JP 11-236310 suggests the use of other film-forming polymers, JP does specify the instant polymers. Also, JP does not specify the use of a surfactant-free mousse formulation.

Bhatt et al teach a hair styling surfactant free mousse containing a polyurethane hair resin. See abstract. Bhatt teaches polyurethane resins have good tear strength, excellent washability, good adhesion, and are soluble in water. Further, Bhatt teaches the use of



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polyurethane resins allow styling of the hair with curling irons and has foaming properties that allow omission of surfactants from the mousse composition. Bhatt et al disclose that the mousse has better hair retention because it is free of surfactants, which can plasticize dry resinous films left on hair, which adversely affect the hair retention properties. See column 3, lines 1-15 and column 7, lines 5-15. Additionally, the reference teaches the use of instant hair fixative resins to provide a degree of stiffness for a certain configuration. See column 13, lines 1-66. Lastly, Bhatt teaches the polyurethane resins and the second fixative resins provide for a clear solution. See column 5, lines 15-20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of JP 11-236310 and Bhatt et al and include a secondary polymer. One would have been motivated to do so since Bhatt teaches the instant polymers are water-soluble polymers that provide styling/holding capacity and stiffness. Further, Bhatt teaches the use of instant polyurethane resins allow the omission of surfactants to provide for better hair hold retention of the resin utilized. Therefore, it would have been prima facie obvious to utilize a secondary fixative polymer in JP's composition for its additive effect and to provide a composition with increased holding capacity. One would have expected success by the combination since JP not only suggests the use of heat-treated xanthan gum in hair cosmetics but also teaches combination of the heat-treated xanthan gum with other conventional water-soluble polymers and Bhatt teaches the instant polyurethane polymer is a water-soluble polymer. Further, a skilled artisan would have reasonably expected success in formulating the heat-treated xanthan gum into a mousse formulation since JP teaches the xanthan gum may be used in hair cosmetics in general.

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**(10) Response to Argument**

**A) Claims 1, 4, 6-11, 18, and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-236310.**

Appellant argues that JP does not teach heat-treating the gum to the instant moisture content. Appellant argues that Kousei teaches heating the xanthan gum to a drying decrease of 50% only.

In response to the above argument, it is the examiner's position that Kousei does not state "no more than half the moisture in the gum should be removed when heat treated". It is the examiner's position that appellant has misinterpreted Kousei's disclosure. The examiner notes Kousei's definition of drying decrease on page 4 wherein Kousei defines drying decrease as "decrease in **quantity** when the gum is heated". The examiner respectfully points out that this means that the drying decrease is measuring the percent change in *quantity* not moisture content from the beginning of the process to the end. Thus, it is the examiner's position that Kousei's disclosure that the "raw material" should have a 50% or less drying decrease with the drying decrease of 15% or less being preferred, means the native xanthan gum must be able to decrease in quantity, of less than 50%, preferably less than 15%. The examiner has not asserted that disclosure is equivalent to a teaching of a moisture content of less than 50% and preferably less than 15%. Rather, it is the examiner's position that Reference Example 1 anticipates the instant invention since Kousei heat-treats the xanthan gum at the same time and temperature as claimed in the independent claims and dependent claims. Independent claim 1 and claim 24 respectively claim the product-by-process limitation that the "xanthan gum has been heat treated at a moisture content of less than about 8%, a temperature of at least about 100°C for at least about 30

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minutes”. Dependent claim 9 recites “wherein the heat treatment is at a moisture of less than about 1% and the temperature is at least about 105°C for at least about 2.5 hours. Example 1 discloses vacuum heating **powdered** xanthan gum with compressed air at a temperature of 115°C for three hours. Kousei discloses that this xanthan gum has a drying decrease of 12%. Again it is the examiner’s position that this refers to measurement of the decrease in quantity of xanthan gum and not moisture content. Thus, it is the examiner’s position that the prior art’s xanthan gum will inherently have the instant moisture content since the process is the same.

With regard to appellant’s argument that Kousei utilizes a liquid-cultured xanthan gum, the examiner points out that Reference Example 1 utilizes *powdered* native xanthan gum and not liquid-cultured xanthan gum.

Appellant argues that Kousei teaches heating the xanthan gum with water vapor and that water vapor will add moisture to the xanthan gum; thus Kousei’s xanthan gum will not have the instant moisture content. It is argued that although the examples heat-treat xanthan gum, this heat treatment is done using air. Appellant argues that it is known that air contains moisture and thus one cannot expect the xanthan gum to have a moisture content of less than 8%.

In response to the above argument, firstly, the examiner points out that Kousei teaches various methods in which the gum is heated and the disclosure is not limited to using water vapor. Further, the examiner points out that Kousei teaches that the inert gases, which include water vapor, carbon dioxide, helium, nitrogen, and compressed air, do not react with the xanthan gum. Note page 5, paragraph 3 wherein clearly Kousei discloses “it is better to perform it in an inert gas which does not react with the xanthan gum”. Therefore, this is implicit teaching that the gas does adversely affect the process of heat-treating the xanthan gum, i.e. the gas does not add

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moisture to the xanthan gum. Additionally, the examiner points to Kousei's working example wherein the gum is heat-treated under vacuum (closed system) using compressed air, not water vapor. The examiner respectfully points out that the purpose of heating under a vacuum is to remove liquid or moisture from a material to dry the material. The purpose is not to add moisture to the material, which would defeat the purpose of the process. Moreover, the air is hot air; thus the amount of moisture in hot air, if any, would be negligible.

Secondly, the examiner notes the instant specification on page 3 states:

Heat treatment of xanthan gum may be accomplished by a variety of methods known in the art including without limitation oven, fluidized bed, infrared and microwave heat treatments. The particle size of the resultant heat-treated xanthan gum may be adjusted using methods known in the art such as milling.

The instant examples in the specification utilize a fluidized bed apparatus. The examiner points out that fluid bed drying also utilizes hot air to dry the material. The examiner points out that the instant specification on page 2, lines 12-15 discloses:

Xanthan gum which has been heat-treated is also known in the art. For example, EP 321 216 enhances the viscosity profile of xanthan gum by thermally treating it in the dry state (15% moisture or less). Heat treatment of xanthan gum is also known in JP Application No. 8-193055 which heat treats xanthan gum in the powdered form.

EP 0321216, of record, further substantiates the examiner's position that using air, especially hot air, does not add moisture. EP 0321216 teaches heat-treating xanthan gum with a fluid bed apparatus using hot air for 2.5 hours. See example 7. The moisture content is reduced to 1%. Thus, clearly the use of air does not necessarily add moisture, as argued by appellant. Additionally, it is noted appellant's process of using an oven to heat treat the xanthan gum, would also cause the xanthan gum to interact with air. Clearly, appellant's methods, i.e. using an oven or a fluidized bed apparatus, also utilize air. Moreover, it is noted that appellant does not

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disclose or mention anywhere in the instant specification that air cannot be used since it adds moisture to the xanthan gum. If this was a possibility (that air added moisture) and was a critical aspect of the process of heating the gum, then appellant's disclosure would have mentioned this. Therefore, it is the examiner's position that appellant's argument that "air can add moisture" has no basis. Lastly, the examiner points out that Kousei discloses other inert gases that are used in the process, including carbon dioxide, helium, nitrogen (it is the examiner's position that the species are sufficiently limited to anticipate the invention), which clearly cannot add moisture to the xanthan gum.

It is respectfully pointed out that the examiner has made a reasonable rationale for inherency and it is applicant's burden to prove that the Kousei's heat-treated gum disclosed in Reference Example 1 does not have the instant moisture content. Appellant has not provided any persuasive *evidence* demonstrating Kousei's heat-treated xanthan gum is different from the instant heat-treated xanthan gum. The examiner respectfully points out that appellant's arguments and suppositions that "air *can* add moisture" cannot take the place of objective evidence.

Appellant argues that Kousei broadly discloses the instant heat-treated xanthan gum in cosmetics and not specifically in a hair fixative composition. Appellant argues that Kousei does not teach a composition that would exhibit 80% curl retention for two hours at 90% relative humidity.

The examiner respectfully points out that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure

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is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

In the instant case, independent claim 1 and 24 are broadly directed to a composition containing heat-treated xanthan gum. The rejected claims do not require or specify any other “hair” excipients or recite any structurally distinguishable hair composition. The examiner points out that Reference Example 2 discloses heating (under vacuum) powdered xanthan gum with compressed air at a temperature of 115°C for three hours; thus, yielding the same heat-treated xanthan gum. The high molecular weight xanthan gum is then added to an aqueous solution at a concentration of 0.5, 1, 1.5, and 2%. The viscosity of 0.5% is 5000 mPas, 1% is 10,000 mPas, 1.5% 22,000 mPas, and 2% is 33,000 mPas. The fixative amount is defined on page 7 of the instant specification in an amount of 0.01-20%. Kousei teaches an amount of 0.01-2%. The prior art’s aqueous solution comprising the instant fixative amount of heat-treated xanthan gum and water reads on the instant “hair composition”.

With regard to the instant functional limitation, the examiner respectfully submits, “products of identical chemical composition cannot have mutually exclusive properties”. See *In re Spada*, 911 F. 2d. 705, 709, 15 USPQ 2d 1655, 1658 (Fed. Cir. 1990). Therefore, it is the examiner position Kousei’s aqueous solution containing the heat-treated xanthan is inherently capable of having a curl retention of at least 80% for at least two hours at 90% relative humidity.

Although appellant has not argued the merits of the Rule 132 Declaration submitted April 18, 2005, the examiner will address the Declaration.

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The Rule 132 Declaration compares inventive Formula 13, which contains 1% of the heat-treated xanthan gum and water with Kousei's example 3, which contains 0.3% heat-treated xanthan gum. Firstly, it is noted that this is not a proper comparison since it is unclear if the fixative effect increases with the weight percent of the xanthan gum. Thus, one cannot determine unexpectedness of the instant composition when the composition contains different amount of xanthan gum. Secondly, it is noted that the examiner specifically relies on Reference Example 1 to reject the claims. The examiner respectfully submits "Evidence of unexpected properties may be in the form of a direct or indirect comparison of the claimed invention with the closest prior art which is commensurate in scope with the claims. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In instance case, the closest example is Reference example 1, which discloses an aqueous solution of the high molecular weight xanthan gum (heat treated at 115 degrees Celsius for 3 hours under a vacuum) at a weight percent of 0.5%, 1%, 1.5%, and 2%.

Thus, it is the examiner's position that the Rule 132 declaration is not persuasive and appellant has not demonstrated that Kousei's composition is not capable of having a curl retention of at least 80% for at least two hours at 90% relative humidity.

**B) Claim 12, 21-22, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-236310 optionally in view of US 6,147,038.**

Appellant argues that Kousei does not teach a xanthan gum heat-treated to a moisture content of 8% or less and does not teach xanthan gum as a hair fixative. Appellant argues that Kousei briefly mentions that the xanthan gum can be used in hair cosmetic compositions; however, all the examples are directed to skin compositions. Appellant argues that the examiner has asserted the prior art teaches a hair fixative gel or cream and this is incorrect.

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As discussed above and incorporated herein, it is the examiner's position that although Kousei's does not explicitly disclose the moisture content of the heat-treated gum, this is inherent.

As acknowledged by the appellant, Kousei suggests the use of the heat-treated xanthan gum in hair cosmetics. The examiner notes that the examples are directed to skin creams; hence the rejection is made under obviousness. However, it is respectfully submitted that "disclosed examples and preferred embodiments do not constitute a teaching away from the broader disclosure or nonpreferred embodiment". See *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). Therefore, the simple fact that Kousei does not exemplify other suggested cosmetics is not equivalent to a teaching away from the formulation of other cosmetics.

With regard to independent claim 21 which is directed to "A method of providing fixative properties to the hair comprising applying the composition of claim 1", the examiner points out that Kousei suggests formulating the heat-treated xanthan gum into a hair cosmetic composition. It is respectfully pointed out that term "hair cosmetic" is implicit for a teaching that the composition will be applied to the hair, i.e. the same method step is taught by Kousei. Thus, it is the examiner's position that the preamble will necessarily flow from following the suggestion of the prior art since the same composition is applied to the same substrate (hair). The examiner further respectfully submits, "[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property, which is inherently present in the prior art does not necessarily



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make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

In other words, the fact that appellant discovered that the heat-treated xanthan gum when applied to the hair, as suggested by Kousei, also provides fixative properties is not considered patentable since this was merely “discovered” by following the suggestion of the prior art. The above argument is applicable to independent claim 22, which is directed to “A method of curl retention under high humidity conditions comprising applying the composition of claim 1”.

With regard to dependent claims 12 and 27, the instant claims recite “a turbidity of no more than about 100 NUT”. Thus, the examiner cites US 6,147,038 to demonstrate the state of the art wherein a “turbid” solution is conventionally given a value about 100 NTU or higher whereas a slight hazy solution has a value 20 to 50 NTU. The examiner relies on US ‘038 to demonstrate that the claimed value of 100 NTU is considered turbid solution and hence the prior art’s Reference Example 1 would also have a similar, if not the same, NTU value since the composition only contains heat-treated xanthan gum and water without any excipients that would increase turbidity to more than 100 NTU. The examiner does not rely on the US ‘038 to provide motivation to utilize an amino-functional silicone to render a clear composition since this is not the premise of the rejection. As stated above, US 6,147,038 is merely used to substantiate the examiner’s position that the prior art’s composition has a substantially similar NTU value as claimed.

Therefore, it is respectfully submitted that the instant claims are obvious to one of ordinary skill in the art since the subject matter in the prior art is suggestive of the subject matter in the present invention.

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**C) Claims 13-14, 16-17, 20-23, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-236310 in view of Bhatt et al (6,113,881).**

Appellant argues that Kousei does not teach the instant xanthan gum with a moisture content of less than 8%. Appellant argues that Kousei teaches the use of water-soluble polymers and film forming polymers but does not teach the instant polymers. Further, appellant argues one would not look to Bhatt since Kousei teaches only ingredients that do not hinder the efficacy of the formulation may be added. Appellant argues Bhatt does not teach the use of natural polymers such as xanthan gum.

The merits of Kousei have been discussed extensively above and are incorporated herein.

The examiner points out that Kousei teaches on page 7:

The cosmetic of this invention may contain solid, semi-solid, or liquid oils, water, alcohols, water-soluble polymer, film-forming agents, surface active agents, foil-soluble gelling agents, organic modified clay minerals, resins, powders, ultraviolet ray absorbents, moisture-holding agents, preservatives, antibiotics, fragrances, antioxidants, pH regulating agents, chelating agents, refreshers, anti-inflammatories, skin-beautifying ingredients ...in ranges which do not hinder the efficacy of the invention.

Further on page 8, fifth paragraph, Kousei teaches a variety of polymers including resins, water-soluble polymers, and film-forming polymers that may be used in combination with the heat-treated xanthan gum. Thus, it is clear that Kousei contemplates the use of various cosmetic polymers and Kousei does not teach away from the use of other polymers. Thus, one would not expect Bhatt's polyurethane resins (film-forming water-soluble polymers) to render an inoperable product, as argued by appellant.

In response to appellant's argument that Bhatt teaches a low viscosity composition and thus one would not have been motivated to combine the references, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure

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of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In instant case, the examiner specifically relies on Bhatt to teach 1) the instant polymers and demonstrate that it is conventional to use of film-forming polymers to increase fixative properties and 2) a surfactant free mousse. Bhatt teaches several advantages of using polyurethane resins including: 1) the resins have good tear strength, excellent washability, good adhesion, and are soluble in water; 2) the polyurethane resins allow styling of the hair with curling irons and has foaming properties that allow omission of surfactants from a mousse composition; 3) the mousse has better hair-style retention because it is free of surfactants, which can plasticize dry resinous films left on hair, which adversely affect the hair retention properties; 4) the resins provide a degree of stiffness for a certain configuration; and 5) the resins provide a clear solution. Thus, as set forth in the rejection, a skilled artisan would have been motivated to specifically utilize polyurethane resins for the advantages discussed above. Moreover, if a skilled artisan desired to formulate a mousse formulations, one would have been motivated to utilize the instant polyurethane resins for their foaming properties. A skilled artisan would have reasonably expected success in the combination since Kousei teaches the heat-treated xanthan gum may be combined with other resins and polymers and Bhatt also teaches the polyurethane resin may be mixed with another fixative polymer and

With regard to appellant's argument that Bhatt does not teach the instant xanthan gum or natural polymers of any kind, the examiner points out that the primary reference is not deficient

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in this sense. Kousei teaches the instant heat-treated xanthan gum and only lacks the teachings of the instant polymers and a mousse formulation. Thus, the examiner only relies on Bhatt to cure *this* deficiency. It is noted that appellant attacks the references individually without arguing the examiner's motivation to combine the references.

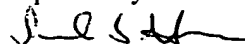
Therefore, it is respectfully submitted that the instant claims are obvious to one of ordinary skill in the art since the subject matter in the prior art is suggestive of the subject matter in the present invention.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

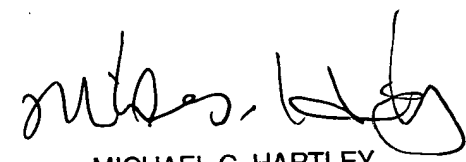
Respectfully submitted,

  
Sharmila S. Gollamudi

Conferees:

  
Johann Richter

Michael Hartley

  
MICHAEL G. HARTLEY  
SUPERVISORY PATENT EXAMINER